

## **IAFI<sup>1</sup>**

### **FURTHER UPDATES TO THE ELEMENTS FOR A NEW ITU-R REPORT ON USAGE OF IMT FOR AIRCRAFT TO EVERYTHING (A2X) COMMUNICATIONS**

#### **1. Introduction:**

ITU-APT Foundation of India (IAFI) submitted a contribution (Document [5D/320](#)) proposing development of a new ITU-R Report on the use of the IMT for Aircraft to Everything (A2X) communications. This contribution was presented during the 47<sup>th</sup> WP-5D and discussed in detail in an offline email discussion group for considering the scope and Title of this proposed new Report. During the offline email discussions group of WG General Aspects, it was agreed to carry forward this item to the next meeting of WP5D in a TEMP document titled “Elements of a working document towards a possible new ITU-R Report on applications of the terrestrial component of International Mobile Telecommunications for communications with Small Unmanned Aerial Vehicles. This document was agreed and was carried forward in Document 5D/413 ([Annex 3.5](#)).

#### **2. Discussion**

This contribution further updates the elements document 5D/413 ([Annex 3.5](#)), focusing on the potential use of terrestrial component of International Mobile Telecommunications (IMT), including IMT-Advanced and IMT-2020, to support Aircraft-to-Everything (A2X) communications, including Aircraft-to-Aircraft (A2A), Aircraft-to-Ground (A2G), and Aircraft-to-Unmanned Aircraft Systems (A2UAS), enabling real-time information exchange for enhanced aviation safety and efficiency, particularly focussed on small UAVs

This contribution also proposes development of a LS to WP5B and ICAO and seek their views on this work being undertaken by WP5D, particularly in the light of decision taken by SG5.

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<sup>1</sup> [ITU-APT Foundation of India](#) is a sector member of ITU-R, ITU-T and ITU-D

### **3 Proposal**

3.1 IAFI through this contribution, proposes further updates to the elements working document for the development of a new ITU-R Report on A2X communications using terrestrial IMT. This contribution also responds to some of the questions raised in the editorial note on the “elements document”. The updated elements document is attached with this contribution.

3.2 It is also proposed that WP5D develop a LS to WP5B as well as ICAO and seek their comments on the outline working document that is being developed by WP5D

#### **Attachment:**

Updated Elements of a working document towards a possible new ITU-R Report on applications of the terrestrial component of IMT for communications with Small Unmanned Aerial Vehicles (IMT.sUAVs)]



Source: Document 5D/TEMP/155(Rev.1)

**Annex 3.5 to  
Document 5D/413-E  
17 October 2024  
English only**

## **Annex 3.5 to Working Party 5D Chair's Report**

[ELEMENTS OF A WORKING DOCUMENT TOWARDS A POSSIBLE  
NEW ITU-R REPORT ON APPLICATIONS OF THE TERRESTRIAL COMPONENT OF IMT FOR  
COMMUNICATIONS WITH SMALL  
UNMANNED AERIAL VEHICLES (IMT.sUAVs)]

*[Editor's Note: The Ad-Hoc meeting of WG General Aspects of WP 5D agreed to have an offline email discussion to address the scope of this potential report (based on Doc. 5D/320). There are some topics that need to be further discussed before any work on this potential new report can start:*

- *What is a "Small UAV". This should be addressed by WP 5B/ICAO?*
- *The scope should be limited to payload communications, as non-payload communication is strictly limited to Control and non-payload communications (CNPC) which relates to safety of flight and collision avoidance. Moreover, WP 5D is not the expert group on situational awareness, CNPC links, collision avoidance, air traffic management or any safety of flight aspects. These issues should be addressed by WP 5B/ICAO.*
- *How Beyond Visual Line of Sight (BVLOS) can be achieved for payload communication and/or without IMT network connectivity. Moreover, there are many restrictions that are applied to UAV/Drones such as airspace restriction and exclusion areas. Additionally governmental, commercial, and recreational users have different requirements.*
- *The scope needs to clearly indicate that 5D is only addressing the application operating in certain MS spectrum identified for IMT, since there are various restrictions to the IMT identified bands (e.g. resolves 2.1 in Resolution 242 (WRC-23)).*

*It would be preferable that WP 5D liaise with WP 5B/ICAO to have their comments and/or collaboration on the above-mentioned topics. Further contributions are invited towards this at the 48<sup>th</sup> Meeting of WP 5D]*

[1 *Scope of the Report*

The purpose of this report is to address the use of terrestrial component of IMT for non-safety communications with small Unmanned Aerial Vehicles (sUAVs). It provides an overview of the evolving trends in IMT based communications of sUAVs including beyond visual line of sight (BVLOS) operations, including their technical and operational characteristics.

**2 Relevant ITU-R Recommendations and Reports**

**3 Acronyms**

**4 Usage and deployment scenarios**

**5 Technical and operational characteristics**

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**6 Summary**

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